

CLAIM AMENDMENTS:

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1. (Previously Presented) A photoelectric converting apparatus comprising:

a sensor unit including a plurality of pixels each having at least a photoelectric converter and a first amplifier for amplifying a signal derived from said photoelectric converter to output the amplified signal; and

a memory unit including a plurality of memories each having at least a storage element for storing therein the signal derived from said sensor unit and a second amplifier for amplifying a signal derived from said storage element to output an amplified signal wherein

a gain of said first amplifier is made different from a gain of said second amplifier.

2. (Previously Presented) A photoelectric converting apparatus according to Claim 1, wherein said first and said second amplifiers are constituted by MOS transistors.

3. (Previously Presented) A photoelectric converting apparatus according to Claim 2, wherein said first and said second amplifiers are constituted by both amplifying MOS transistors and load MOS transistors.

4. (Previously Presented) A photoelectric converting apparatus according to Claim 3, wherein a conductance of the load MOS transistor included in said first amplifier is made different from a conductance of the load MOS transistor included in said second amplifier.

5. (Previously Presented) A photoelectric converting apparatus according to Claim 4, wherein a gate length of the load MOS transistor included in said first amplifier is made different from a gate length of the load MOS transistor included in said second amplifier.


6. (Previously Presented) A photoelectric converting apparatus according to Claim 4, wherein a gate width of the load MOS transistor included in said first amplifier is made different from a gate length of the load MOS transistor included in said second amplifier.

7. (Previously Presented) A photoelectric converting apparatus according to Claim 4, wherein a gate oxide layer thickness of the load MOS transistor included in said first amplifier is made different from a gate oxide layer thickness of the load MOS transistor included in said second amplifier.

8. (Previously Presented) A photoelectric converting apparatus according to Claim 3, wherein a conductance of the amplifying MOS transistor included in

said first amplifier is made different from a conductance of the amplifying MOS transistor included in said second amplifier.

9. (Previously Presented) A photoelectric converting apparatus according to Claim 8, wherein a gate length of the amplifying MOS transistor included in said first amplifier is made different from a gate length of the amplifying MOS transistor included in said second amplifier.

 10. (Previously Presented) A photoelectric converting apparatus according to Claim 8, wherein a gate width of the amplifying MOS transistor included in said first amplifier is made different from a gate width of the amplifying MOS transistor included in said second amplifier.

11. (Previously Presented) A photoelectric converting apparatus according to Claim 8, wherein a gate oxide layer thickness of the amplifying MOS transistor included in said first amplifier is made different from a gate oxide layer thickness of the amplifying MOS transistor included in said second amplifier.

12. (Previously Presented) A photoelectric converting apparatus according to Claim 1, further comprising a transferring system for amplifying the signal derived from said sensor unit and/or said memory unit to transfer the amplified signal to said sensor unit and/or said memory unit.

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